

# Red-billed Tropicbird *Phaethon aethereus* in the Azores: first breeding record for Europe

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In September 1993 we visited many islands in the Azores to study seabird populations and ecology. We spent four days and three nights on a small islet 'Ilheu de Baixo' (39°00'N, 27°57'W) off Graciosa in the central group of the Azores archipelago. This islet has steep cliffs of volcanic rock, an area of boulders below one cliff, and a cap of compact gravelly soil crowning the summit. The highest point of the crown is 73 m above sea level. The islet has populations of Cory's Shearwater *Calonectris diomedea* (about 150 burrows contained well-grown chicks during our visit, with most occupied burrows between boulders or in shallow soil below the cliffs), Madeiran Storm Petrel *Oceanodroma castro* (large numbers were visiting nest sites in preparation for breeding, most activity being over the boulder-fields below the cliffs), Little Shearwater *Puffinus assimilis* (small numbers were active at night amongst the storm petrels but this species is a winter breeder here), Yellow-legged Gulls *Larus cachinnans atlantis* (in May 1993 about 300 pairs were estimated to breed in the colonies, some on an area of boulder-field but most on the summit cap of the islet; during our visit adults were attending the colony but their chicks had fledged and almost all fledglings had dispersed). Small numbers of Common Terns *Sterna hirundo* were present on the edges of the islet but breeding had clearly finished much earlier in the summer.

The upper slopes of the islet are difficult to reach as they are surrounded by a vertical belt of rock or compacted grit cliff with only one point of ascent, and that being slightly awkward. The upper slopes consist of patches of bare grit, short grass and areas of densely growing flowering plants. In September these had died due to the normal summer shortage of water and were standing to form a canopy of flower stems and heads about 1 m off the soil surface. The majority of the gull territories lay over much of these slopes, with nest sites still evident, though the postbreeding adult gulls were mainly forming large flocks on the less vegetated patches. Close to the summit of the islet and on the edge of the gull colony we found a Red-billed Tropicbird *Phaethon aethereus* incubating a single egg in a scrape underneath the thin canopy of dried plants. The bird was immediately recognisable to species because of its size, white plumage with characteristic black markings on the nape, back and shoulders, its heavy blood-red bill, narrow pointed wings and broad tail (though the elongated white central tail feather was broken short). It remained with its egg despite our approaching to within 1 m, turned to face us, arched its wings, raised its tail and neck feathers and opened its bill in threat. About 1 m from the nest scrape lay a second egg, closely similar in size

and markings to the one in the nest, but pierced and empty. We assume that this broken egg represented an earlier clutch laid by the same pair, but lost to gull predation, and that the egg being incubated was a replacement clutch. We left the bird on its egg and returned about an hour later with ringing and measuring equipment and cameras.

The egg measured 56.6 by 43.4 mm and was ovate (neither end being markedly broader), matt off-white with considerable rusty-brown speckling and smudging. The incubating bird weighed 680 g, and measurements were: wing length (maximum chord) 308 mm, head-plus-bill 116 mm, bill length (culmen) 59.3 mm, bill depth at gonys 14.1 mm, bill depth at nostril 18.5 mm. These measurements fall within the range given for the tropical North Atlantic subspecies *P. a. mesonauta* (Cramp & Simmons 1977), which would be the most likely to occur since this subspecies breeds in the Cape Verde Islands and West Indies. The bird had a bright blood-red bill, a pronounced black eye-stripe and jet black barring on the back, characters typical of this subspecies and ruling out the nominate *P. a. aethereus* (South Atlantic) and *P. a. indicus* (Indian Ocean). We ringed the bird, put a small spot on its forehead with an indelible marker pen, and released it back onto its egg. It immediately postured aggressively, uttering a harsh and loud churring noise for about ten seconds before settling onto its egg and resuming incubation. We returned to visit the nest after 4, 15 and 24 hours, finding the same individual on the egg on each visit. The partner was never seen and the incubating bird was not seen away from its nest. However, we left the islet on 24 September so were unable to continue observations. During a very brief return visit in late October 1993 there was no sign of the adults and the nest site was empty, so the breeding attempt clearly failed. Since the interval between egg loss and laying of a replacement clutch is about 42–112 days and incubation lasts for about 43 days (Cramp & Simmons 1977), the first egg was probably laid in May, and so the tropicbird would have been breeding alongside the Yellow-legged Gulls and on the edge of that colony. The gull colony probably provided the stimulus for the birds to attempt breeding on this islet, tropicbirds being highly social breeders.

There are not only no previous breeding records in Europe, but also very few European records of vagrant Red-billed Tropicbirds. The species is not migratory and rarely occurs outside its normal tropical range. Red-billed Tropicbird was listed by Le Grand (1983) as a possible but unconfirmed very rare or accidental visitor to the Azores. Cramp & Simmons (1977) report two records from Madeira; one in 1893, and one in 1966. However, in the last few years there seem to have been an unusually high number of sightings north of the normal range of Cape Verde birds. In addition to our breeding record, there is a recent unreported sighting of two tropicbirds near Condor Bank, about 150 km SW of Graciosa, in late October 1991 (Bill Herbert, pers. comm.). Sight records have been reported from the Canaries (24 March, 12 and 19 April 1991; 23 May 1992; Anon 1991, 1992) and a dead immature was found on a beach in Suffolk in February 1993

(Anon 1993). This last may be of doubtful status, as was a winter beached tropicbird in the Netherlands in 1985 (Bruinzeel 1986). Whether the sight records from the Canaries and our breeding record represent the start of a range extension to northern Macaronesia is not clear, nor is the source of these birds. Bannerman & Bannerman (1968) reported that there had been "an alarming decline" in numbers and breeding distribution of Red-billed Tropicbirds in the Cape Verde Islands during the 1950s and 60s, the population having fallen to less than 1000 individuals by the late 1960s (de Naurois 1969). We have no information on more recent population trends in that group. Le Grand *et al.* (1984) provide no information subsequent to the surveys of de Naurois (1969). However, it is perhaps as likely that the birds breeding in the Azores originated from the population in the West Indies as from the Cape Verde Islands. Halewyn & Norton (1984) considered the population of Red-billed Tropicbirds in the Caribbean to be above 1600 pairs and probably stable in numbers, so it seems that the west Atlantic holds about three-quarters of the population of this subspecies.

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